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No. 92-1189

IN THE
Supreme Court of the United States
OCTOBER TERM, 1992

COLUMBUS-AMERICA DISCOVERY GROUP, INC.,
Petitioner,

v.

ATLANTIC MUTUAL INSURANCE COMPANY, *et. al.*,
Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE AND BRIEF AMICUS CURIAE OF THE OHIO ACADEMY OF SCIENCE IN SUPPORT OF PETITIONER

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MOTION FOR LEAVE TO FILE BRIEF AMICUS CURIAE OF THE OHIO ACADEMY OF SCIENCE IN SUPPORT OF PETITIONER

The Ohio Academy of Science hereby moves, pursuant to Rule 37.2 of the Rules of this Court, for leave to file the attached brief as *amicus curiae*. Counsel for the petitioner has consented to the filing of this brief; counsel for the respondents have refused consent.

Founded in 1891, The Ohio Academy of Science is a non-profit organization interested in science and technology. The Academy embraces all scientific disciplines, encouraging the discovery, dissemination and practices of science, mathematics and engineering. Among the Academy's objectives are to stimulate interest in the sciences, to promote research, to improve instruction in the sciences, and to recognize high achievements in attaining these objectives.

The Academy promotes cooperation between academic and industrial scientists, provides youth science opportunities through a Junior Academy program and presents scholarly papers. The Academy is vitally concerned about the need to maintain and improve the climate for curiosity, discovery and innovation.

The repose, certainty and predictability of the maritime law of finds have been effectively destroyed by the Fourth Circuit's opinion. Yet, it was that repose, certainty and predictability that allowed the chemists, biologists, oceanographers and historians working on the *S.S. Central America* Project to discover an extraordinary deep-sea community of life forms, to recover a lost part of America's heritage, to advance scientific progress, and to provide educational programs in museums across the country.

Scientific research is limited only by the imaginations of the scientists who are afforded the opportunity to participate in such ventures, and thus turns on the ability of such ventures to attract private venture capital. By creating uncertainty as to the ownership of long-lost shipwrecks, the decision below will render it difficult, if not virtually impossible, to attract the private funding needed for scientific exploration and discovery in remote areas, such as the deep seas.

If the Fourth Circuit's decision is allowed to stand, the result may well be that scientists and engineers who dare to dream, and whose vision, hard work and ingenuity make their dreams a reality, will be tied up in costly and protracted litigation over dozens of stale claims. Such scientists and engineers should be acquiring knowledge and, thus, producing benefits for all by investigating new frontiers, such as the deep ocean, rather than being held hostage in the nation's courthouses.

For these reasons, the Court should grant this motion for leave to file the attached brief *amicus curiae* in support of the petitioner.

Respectfully submitted,

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QUESTION PRESENTED

May admiralty courts continue to infer abandonment of long-lost shipwrecks from the passage of many decades, non-use, and all other relevant facts and circumstances, and accordingly award ownership of a shipwreck to those who discover, recover and conserve it under the law of finds; or must courts award title to purported insurers and their successors who claim ownership of a shipwreck under the law of salvage on grounds that abandonment can never be found absent clear and convincing evidence that the purported owners expressly renounced title?

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BRIEF OF THE OHIO ACADEMY OF SCIENCE AS AMICUS CURIAE IN SUPPORT OF PETITIONER

STATEMENT OF INTEREST

Founded in 1891, The Ohio Academy of Science is a non-profit organization of those interested in science and technology, whose mission is to empower curiosity, discovery and innovation by stimulating interest in the sciences, engineering and technology; by promoting and supporting research; by improving science education; by disseminating scientific knowledge; and by recognizing and publicizing high achievement in attaining these objectives. The Academy embraces all scientific disciplines, encouraging the discovery, dissemination and practices of science, mathematics and engineering. Its efforts extend to the public and private schools, the universities and colleges, museums, mines, farms, factories and service establishments of Ohio. The Academy promotes cooperation between academic and industrial scientists, provides youth science opportunities through the Junior Academy program, presents scholarly

papers, publishes and distributes *The Ohio Journal of Science*, bestows public recognition of excellence in education and research, and provides advice to public policy makers.

Significant legal and social change has occurred in our nation since the Academy's beginnings in 1891. But one thing has remained constant: the need to maintain and improve the climate for curiosity, discovery and innovation. Because of its enduring concern with this need, and because the Academy is deeply distressed over the chilling effect of the court of appeals' opinion on scientific investigation of the deep sea, The Ohio Academy of Science urges the Court to review the decision below.

THE PETITION FOR CERTIORARI SHOULD BE GRANTED

I. THE COURT SHOULD GRANT REVIEW BECAUSE OF THE IMPORTANT QUESTION OF ADMIRALTY AND MARITIME LAW PRESENTED THAT, IF LEFT UNRESOLVED, WILL FORECLOSE OPPORTUNITIES FOR SCIENTISTS TO ATTRACT PRIVATE VENTURE CAPITAL IN THEIR STUDIES OF THE DEEP SEAS, AND THEREBY HAMPER RESEARCH AND DEVELOPMENT IN A BROAD ARRAY OF SCIENTIFIC DISCIPLINES

A. The Seas and Their Myriad of Resources Offer Great Potential for Stimulating Advances in Human Knowledge and Responsible Enjoyment of Marine Environments

As the last frontier on earth, the deep seas may help shape the future of mankind. The world's oceans cover more than two-thirds of the planet. Their vast, untapped resources—biological, medical, and chemical—remain largely unexplored.

Early in the 1980s, more than 125 years after the *S.S. Central America* disaster, a small group of engineers and scientists in Columbus, Ohio teamed together to explore

the deep-sea frontier. As their vision of locating and recovering the wreck of the *S.S. Central America* progressed, it grew to include an international network of scientists interested in the program. Charles E. Herdendorf, *Discovery in an Alien Environment,* American History Illustrated, Mar.-Apr. 1991, at 66.

Even before these diverse scientific investigations were under way, science and the scientific method were playing a critical role in the *S.S. Central America* Project, as navigational records and accounts of some sixty survivors and witnesses were investigated and analyzed to compile a data matrix, cataloging events and conditions at three-hour intervals during the voyage's final thirty hours. A specialist in modern search theory mathematics then used this data to develop a reasonably well-defined search area. With the help of computer models and meteorological and oceanographic data, he determined the probable effects of the hurricane winds and ocean currents upon the stricken vessel under a series of possible scenarios. The resulting "probability maps" suggested that the wreck lay within a fourteen-hundred-square-mile area of sea floor on the Blake Ridge. *Id.* A wide-swath, side-scanning sonar system was then used to finally determine the location of the shipwreck.

Once the shipwreck was found, science and the scientific method again played crucial roles, as the submersible designed, engineered and built by Columbus-America Discovery Group, *Nemo,* transmitted three-dimensional images to scientific researchers on the surface vessel, thus providing "telepresence" and excellent underwater depth perception. *Nemo's* five camera booms also provided multiple perspectives for recording the deep-sea investigation. *Id. Nemo's* robotic arms and tactile manipulators are powerful enough to handle and recover massive objects, "yet sensitive and precise enough to retrive gold coins smaller than a dime." *Nemo* uses a hydraulic "dustpan" and water-jet system to recover particularly delicate arti-

facts. The relative locations of loosely grouped objects are preserved, as *Nemo* utilizes an injector system that encases the materials in a fast-hardening silicon fluid. *Id.*

Because long-lost and abandoned shipwrecks like the *S.S. Central America* are a biological oasis on the ocean floor, exploring them affords a unique opportunity for scientific study of marine life and the deep-sea environment. Over the years, a multitude of minute shells have rained down upon such vessels from the ocean's surface. These shells form an oasis among the wooded timbers, coal, and metalworks that have been colonized by a diverse group of deep-sea animals such as amphipods, barnacles, feather and serpent stars, galatheid crabs, glass sponges, gorgonian coral, polychaete worms, pholadid clams, sea anemone, sea cucumbers, and several species of deep-sea fishes. These creatures are often unexpectedly brilliant in color—pink and gold coral, vermilion starfish, orange and yellow anemone, purple sea cucumbers, red shrimp, and stark white crinoids—and are always stunning in their diversity and potential in scientific study. *Id.*

B. In Addition to Opportunities for Scientific Research, Exploration of Long-lost Items on the Seafloor Provides the Foundation for Scientific Breakthroughs in Medicine, Food Production, Energy and Education

Although the opportunities presented by shipwrecks for pure scientific research and development are legion, deep ocean shipwrecks provide enormous potential for significant practical applications. The potential practical applications of such scientific research are limited only by the opportunities afforded scientists to participate in such efforts, and thus turn on the ability of these endeavors to attract private venture capital. *See id.* at 71.

The *S.S. Central America* Project has unveiled practical applications in an array of fields. For instance, food

chain analysis performed as part of the shipwreck study presents substantial opportunities for better understanding of the food chain, and may help expand available food supplies, both plant and animal.

The *S.S. Central America* Project also promises to lead to significant breakthroughs in medicine. As the supply of new strains of viruses and simple terrestial organisms continues to diminish, deep-sea organisms will be needed in developing new types of vaccinations and medicines. Newly found forms of deep-sea marine life have already shown great potential to serve anti-viral, anti-fungal, anti-tumor, anti-inflammatory, and immunomological purposes. Without the type of innovative deep ocean discovery (and the corresponding developments in marine technology and methods of scientific investigation in the oceans) conducted by ventures such as the *S.S. Central America* Project, it will be difficult to obtain the supplies of organisms desparately needed by the medical community. The discovery of 11 new species of marine life by the Project, some of which present substantial promise in pharmacological and medical applications, is illustrative of the opportunities presented by ocean research and development.

C. Scientific Research in the Deep Seas Is Enormously Expensive and Risky, and the Protracted and Costly Title Litigation Sanctioned by the Decision Below Will Hamper the Ability of Scientists to Attract Badly Needed Funding

The very undertaking of deep-ocean research is fraught with risk. Failure can literally occur at any stage of the discovery and recovery processes. The costs associated with the development of innovative marine technologies needed for deep-sea discovery are tremendous. Such endeavors rely almost exclusively on sophisticated and costly specialized technologies. *See* U.S. Congress, Office of Technology, *Technologies for Underwater Archaeology and Maritime Preservation—Background Paper*, OTA-BP-E-

37, 8 (1987). *See generally* Drew F. T. Horrell, Note, *Telepossession is Nine-Tenths of the Law: The Emerging Industry of Deep Ocean Discovery*, 3 Pace Y.B. Int'l L. 309 (1991) [hereinafter, Horrell, *Telepossession*] (describing these technologies).

The risk and cost inherent in deep-sea research is now compounded by the decision below. That decision invites speculative and even fraudulent claims, thus ensuring burdensome and extremely costly litigation, and rendering it nearly impossible to attract the private funding and enterprising explorers required to explore and conduct research in remote environments. In the past, the incentives provided by the certainty and predicability of title to items long-lost at sea—which vested in the discoverer under the prevailing law of finds—helped attract funding for such risky ventures. *See Martha's Vineyard Scuba Headquarters, Inc. v. Unidentified, Wrecked and Abandoned Steam Vessel*, 833 F.2d 1059, 1065 (1st Cir. 1987) (law of finds applies when "articles have been presumptively abandoned, *i.e.* either affirmatively renounced, or *so long lost that time can be presumed to have eroded any realistic claim of original title . . . .*") (emphasis added); *Cobb Coin Co. v. Unidentified, Wrecked and Abandoned Sailing Vessel*, 549 F. Supp. 540 (S.D. Fla. 1982).

The conflict in the applicable law, and in particular the decision below, make it extremely difficult, if not impossible, to quiet title to cultural deposits in the deep ocean without costly and burdensome litigation, and thus, it jeopardizes the future of deep-sea research. *See* Anne G. Giesecke, *To Be or Not To Be Abandoned*, Sea Technology, Jan. 1993, at 93. It will be difficult, if not impossible, to attract and maintain the private venture capital required for deep-sea science. *See* 30 U.S.C. § 1401(a)(13) (finding that the uncertainty of the applicable legal regime discourages private investment in deep-sea discovery).

II. THE COURT SHOULD GRANT REVIEW TO RESOLVE A CONFLICT AMONG THE CIRCUITS AND STATE SUPREME COURTS IN THE APPLICATION OF MARITIME LAW THAT BURDENS SCIENTIFIC INVESTIGATION OF DEEP-OCEAN SHIPWRECKS AND IMPAIRS THE ABILITY OF SCIENTISTS TO PARTICIPATE IN DEEP-OCEAN PROJECTS

A. As Noted By the Dissenting Opinion Below, the Court of Appeals' Decision Is in Conflict With the Principles of Federal Maritime Law Applied by Other Circuits and by State Courts

Under the Fourth Circuit's opinion, no factual showing of abandonment based on circumstantial evidence can ever be made. Thus, under the court of appeals' new test, no abandonment can be found absent an express declaration renouncing title. Because of the passage of time and other factors, there is rarely, if ever, any evidence that the former owner of a long-lost shipwreck affirmatively renounced all rights to the shipwreck's cargo. *Columbus-America Discovery Group v. Atlantic Mutual Insurance Co.*, 974 F.2d 450, 472 (4th Cir. 1992) (Widener, J., dissenting). Accordingly, it will be nearly impossible for finders to carry the onerous burden of proof imposed on them by the Fourth Circuit. The new test in the opinion allows claims of ownership, scores of years old, to cloud title to property found at sea, hampering freedom of scientific investigation and exploration of the deep seas in contravention of U.S. policy and jurisprudence. *See* 30 U.S.C. § 1401(a)(12); 30 U.S.C. § 1402(a) (asserting the U.S. policy of maintaining the freedom to explore and recover the resources of the deep sea).

By according a presumption of ageless vitality to purported ownership interests in long-lost shipwrecks, the Fourth Circuit's opinion undermines the certainty and predictability heretofore accorded explorers who have found, taken into possession, and conserved long-lost items on the seabed. The court of appeals' virtual assurance

that the maritime law of finds will not apply whenever a claim is asserted by a purported successor in interest to an original owner thus extends a blanket invitation to highly speculative and fraudulent claims. The repose, certainty and predictability of maritime law of finds, have been effectively destroyed by the Fourth Circuit's opinion.[1] Yet, it was that repose, certainty and predictability that had allowed the chemists, biologists, oceanographers and historians working on the *S.S. Central America* Project to discover the extraordinary deep-sea community of life forms, to recover a lost part of America's heritage, to advance scientific progress, and to provide educational programs in museums across the country.

B. By Improperly Shifting an Impractical Legal Standard and an Unrealistic Burden of Proof Onto Discoverers, the Court of Appeals' Decision Penalizes and Discourages Scientific Inquiry Into Information That Might Identify Potential Claimants

The court of appeals' decision means that scientists who discover information linking particular artifacts to former

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[1] In applying the law of finds, admiralty courts have determined that, as a threshold, the finder must act in good faith to protect the scientific, historic and archaeological values of the shipwreck. By contrast, a court has no power to impose such a requirement on a claimant alleging original ownership (or a claim of subrogation). The alleged owner, acting either directly or through contract salvage, may do whatever it desires with its property, without regard to the destruction of the scientific and historic information. Indeed, insurers typically handle salvage on a "no cure, no pay" basis; salvors are compensated solely for salvaging the insurers' alleged property—not for protecting others' interests. Therefore, the application of the law of salvage not only flies in the face of established maritime law, but it threatens to destroy the scientific and historical value of shipwreck sites. Contract salvage used by the Fourth Circuit places no duty on the finder or salvor to protect the scientific, *or* historic, *or* archaeological values of the shipwreck site or its artifacts. *See* Nicholas J. J. Gaskell, *The 1989 Salvage Convention and the Lloyd's Open Form Salvage Agreement*, 16 Tul. Mar. L.J. 1 (1992). *See also* Horrell, *Telepossession*.

owners hundreds of years in the past may face literally dozens and dozens of lawsuits. The opinion openly invites handfuls of those who appear generations after a vessel has been lost and forgotten by history to file claims of ownership, whether as descendents of passengers who sailed aboard the ship, heirs of captains and crew members, or insurance companies claiming by subrogation. *Columbus-America Discovery Group*, 974 F.2d 450.

The result is that scientists and engineers like those in Columbus-America Discovery Group, who dare to dream, and whose vision, hard work and ingenuity make their dream a reality, are tied up in costly and protracted litigation over dozens of stale claims. Such costly and protracted litigation sanctioned by the decision below will burden not only the scientists who make finds but also the admiralty courts, which are faced with "the Herculean task" of adjudicating rights in items lost for hundreds of years. *Id.* at 475 n.7. Such scientists and engineers should be acquiring knowledge and producing benefits for all by investigating the new frontiers of the deep ocean, not being held hostage in the nation's courthouses. And society should enjoy the benefits of their efforts and hard work.

The decision below creates a conflict with not only the other circuits that have considered the standards for determining abandonment of long-lost property on the seabed, but also the state courts. As the dissent notes, the decision below is in conflict with the principle that "[a]bandonment may be inferred from all of the relevant facts and circumstances and may be determined on the basis of circumstantial evidence." *Id.* at 472. Under the principle of *animus revertendi*, abandonment may be inferred based on the conduct of the claimant to ownership, and "A formal declaration is not necessary; abandonment may be inferred from acts and conduct of an owner clearly inconsistent with an intention to return to the property, and from the nature and situation of the property." *See Hatteras, Inc. v. The U.S.S. Hatteras*, 1984 A.M.C. 1094, 1097 n.5 (S.D.N.Y. 1981).

The issue is thus important and unsettled—and in desperate need of resolution by the Court. "How the law of finds will turn out in cases on the high seas will need resolution by the Supreme Court. What proof is needed to show abandonment?" Paul S. Edelman, *Who Gets Treasure Recovered From Sea?* N.Y. L.J., Dec. 4, 1992, at 3, 4.

Worse yet, due to the conflict among the circuits, scientists are faced with the intolerable dilemma of having their research impeded by the thought that if they conduct scientific inquiry that may link particular artifacts to potential claimants, they may be subjecting themselves and their work to intensive litigation, and that if they do not, they may be forever losing the opportunity to discover valuable and important scientific and historic information. See William J. Broad, *Deepest Wrecks Now Visible to Undersea Cameras*, N.Y. Times, Feb. 2, 1993, at B6 (Fourth Circuit's decision will encourage secretiveness and discourage the dissemination of information, about deep-sea wrecks).

If the Fourth Circuit's decision is allowed to stand—and those who do nothing are bestowed a windfall from the risk and hard work of others—we will all be the losers.

CONCLUSION

For the foregoing reasons, the petition for a writ of certiorari should be granted.

Respectfully submitted,

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